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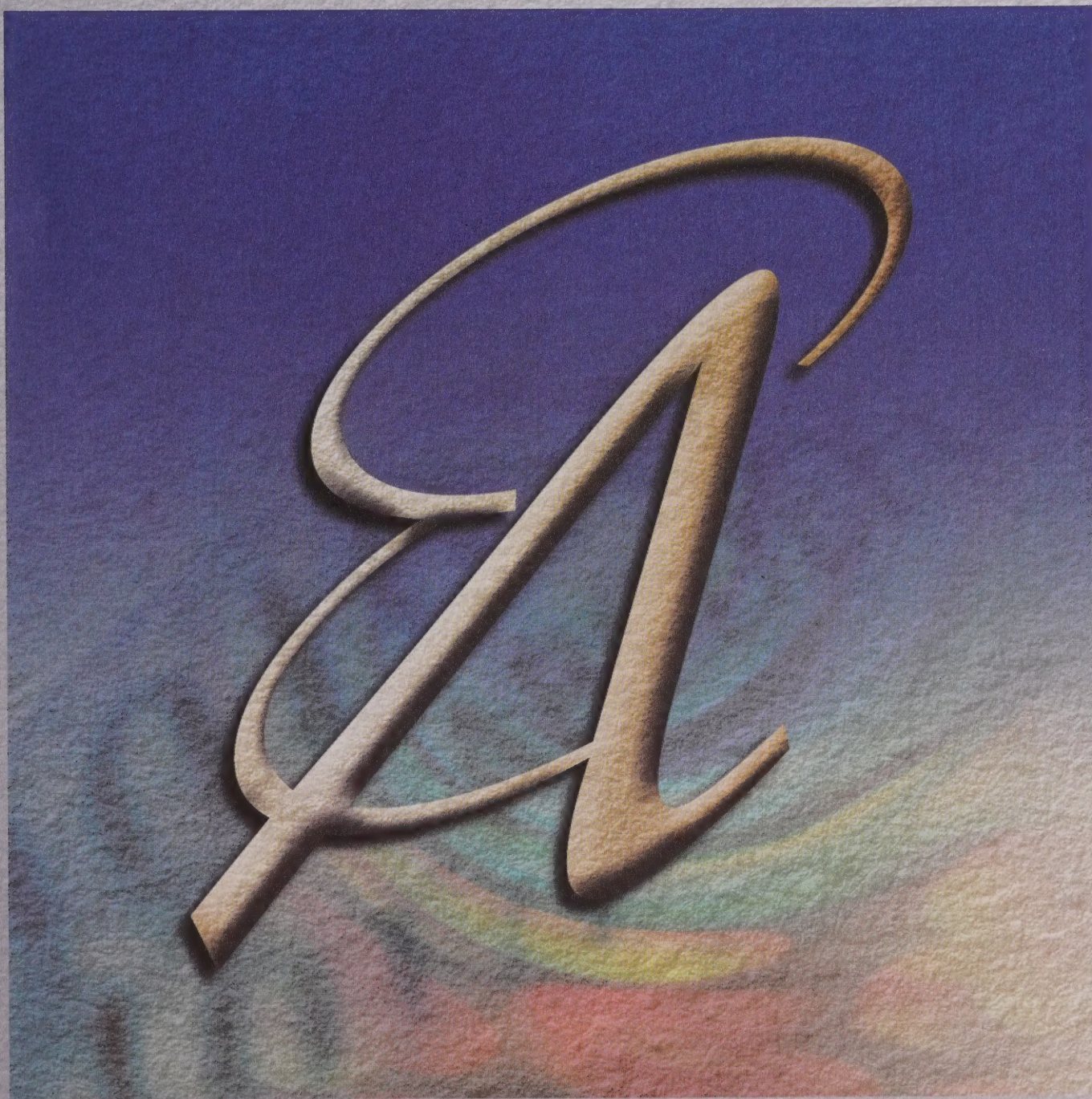
Research Document

Balance of Payments Division

*Foreign Affiliate Trade Statistics – Canadian Operations
Abroad, 1999 to 2001*

by Michael Marth

N° 013



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Foreign Affiliate Trade Statistics Canadian Operations Abroad, 1999 to 2001

by

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Abstract

Canadian goods and services can be sold in the international market either through cross-border exports or through foreign affiliates. Cross-border exports involve Canadian companies producing the goods and services in Canada and exporting them to the foreign markets. Sales through foreign affiliates involve establishing a commercial presence in the foreign market from which to conduct business transactions.

Foreign Affiliate Trade Statistics (FATS) measure both the operations of (i) foreign-owned affiliates in Canada and (ii) affiliates of Canadian firms located abroad. This report covers the activities of foreign affiliates of Canadian multinationals abroad or outward FATS.¹ It is a follow-up to a previous report titled *Foreign Affiliate Trade Statistics- 1999, How Goods and Services are Delivered in International Markets*.²

Continuing globalization of the world economy, and an increasing occurrence of trade agreements have created a need for this type of information. With this second release of FATS data, the data for 2000 and 2001 are being added to the 1999 data released last year. Comparing FATS data with cross-border exports further examines the relationship between exports and foreign direct investment.³ Other characteristics such as industrial activity, location, goods/services composition and affiliate size are presented as part of the overall descriptive analysis.

Keywords: Foreign affiliate trade statistics, investment, trade, goods, services, FATS.

¹ Comparable data for the activities of foreign-owned affiliates in Canada have not yet been compiled.

² *Foreign Affiliate Trade Statistics- 1999, How Goods and Services are Delivered in International Markets* (11F0027MIE no. 4, free) is available on Statistics Canada's web site (www.statcan.ca).

³ Cross-border exports refer to exports from Canada to other countries. Foreign direct investment is defined in the *Appendix* at the end of this report.

Executive summary

The level of Canadian direct investment abroad (CDIA) has increased substantially in recent years. At year-end 2001, CDIA was at \$390 billion, up 34% from just two year's earlier.⁴ Acquisitions of foreign companies totaling \$49 billion in 2000 and \$25 billion in 2001 were a big factor in this growth. Sales of foreign affiliates have also increased significantly (17%) over this two-year period, reaching \$371 billion in 2001. At 945,000, employment abroad in foreign affiliates is still relatively small compared to Canada's total employment of 15.1 million at the end of 2001.⁵

Foreign affiliate sales and cross-border exports both experienced strong growth in 2000 followed by marginal growth in foreign affiliate sales and even a slight decline for exports in 2001. At \$415 billion in 2001, exports of goods continue to dominate (88%), whereas goods-producers accounted for \$215 billion or 58% of foreign affiliate sales in 2001.⁶ In addition, sales of foreign affiliates were much less concentrated in the United States as compared with exports.

Foreign affiliate service-providers recorded sales of \$156 billion—close to triple the \$57 billion in cross-border exports of services. Moreover, from 1999 to 2001, the share of exports of services in relation to total exports declined marginally from 13% to 12%, as compared with service-providers seeing their share of foreign affiliate sales increase from 38% to 42%. The latter may have resulted from a higher rate of entry of service-providing foreign affiliates as compared with goods-producers. Another possibility is that some exporters of services may have shifted to delivering their services through foreign affiliates. This may be due in part to the nature of the service as some services are better delivered through foreign affiliates because of the need for close, continuing contact between the service-providers and their clients.⁷

In 2001, the Manufacturing sector accounted for \$172 billion or almost half (46%) of foreign affiliate sales. The Computer Equipment and Primary Metals sub-sectors together accounted for just over one-quarter of all Manufacturing sales.

Sales in the United States dropped \$9 billion in 2001, yet continued to account for close to two-thirds' (63%) of foreign affiliate sales.

Close to one-half (46%) of all sales were attributed to the 3% of foreign affiliates who had a direct investment book value of greater than \$500 million.

⁴ CDIA measures the book value from the financial statements of the enterprises in which the direct investment is made. For the most recent data see *The Daily*, March 26, 2003, Statistics Canada, Catalogue no. 11-001-XIE ISSN 0827-0465.

⁵ *Labour Force Information*, Statistics Canada, Catalogue no. 71-001-XIE.

⁶ *Canada's Balance of International Payments*, Fourth Quarter 2002, Table A, Catalogue no. 67-001-XPB.

⁷ *Survey of Current Business*, October 2002, p. 68, Bureau of Economic Analysis, Washington, D.C.

Background and coverage

A detailed discussion on the rationale for collecting these statistics as well as a proposal for how to measure them have been presented in the research paper, *Foreign Affiliate Trade Statistics, Measuring Economic Globalization, A Canadian Perspective— From Research to Reality* (www.statcan.ca - Products and services - Research papers - National accounts - Balance of Payments Division).

The quality of the data in this report has improved significantly. A new methodological approach was adopted and resulted in the previously published 1999 data being revised (see section on *Data Quality*).

To measure outward FATS, the Balance of Payments Division has expanded the statistical system that is already in place to measure Canadian Direct Investment Abroad. All enterprises receiving the questionnaire *Capital Invested Abroad by Canadian Enterprises* (approximately 1,620 for 2001) were asked to report employment and sales for each of their foreign subsidiaries, branches, joint ventures and associates (close to 4,500 foreign entities for 2001).

In order to be consistent with the international practice for measuring FATS, only the data for majority-owned foreign affiliates (MOFA's) are included (see "Ownership" in the *Appendix* attached). For operational reasons, depository institutions and foreign branches of firms were excluded from the 1999 to 2001 estimates. Therefore, all data unless otherwise stated refer to non-bank MOFA's of Canadian companies.

For reporting year 2001, the non-bank MOFA universe included 1,392 Canadian enterprises reporting on the activities of 3,773 foreign affiliates. These affiliates are located in over 135 countries, and accounted for 85 different industrial activities (at the 3-digit NAICS level).⁸

There are two important qualifiers that must be remembered when reviewing the data in this report. Sales and employment figures of non-bank MOFA's are fully attributed—there is no adjustment for less than 100% ownership. Secondly, the sales are attributed to the country as reported by the respondent company in the questionnaire. If a company consolidates third country sales data into a primary subsidiary in a different country, the sales are attributed to the country of the primary subsidiary. These and other concepts are further discussed in the *Appendix* attached.

⁸ NAICS is the North American Industrial Classification System. Companies were requested to use these codes to identify the principal industrial activity of their foreign entities. The United States uses NAICS to measure the operations of its foreign affiliates as well.

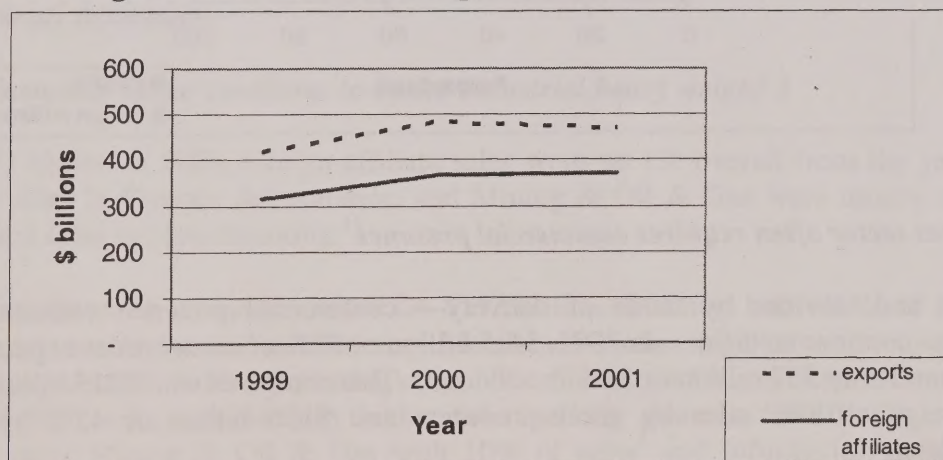
Commercial presence in relation to cross-border exports

Foreign affiliate sales and exports grow in tandem

While the data are limited (i.e. only 3 years), there appears to be a possible complementary relationship between the overall level of foreign affiliate sales and exports. Indeed, several studies have concluded that trade and foreign direct investment are complementary.⁹

It would not be accurate to make direct comparisons between foreign affiliate sales and exports as the former are based on industrial activities and the latter on product classification. However, in looking at the sectors that accounted for the changes we can attempt to identify any similarities that may exist on an industrial basis. The significant rise in exports (15%) from 1999 to 2000 was driven primarily by energy exports to the U.S. market. The increase in foreign affiliate sales occurred in Manufacturing, Finance & Insurance, and some other service-oriented industries.¹⁰ As such, there was no clear relationship on an industrial basis in 2000. However, in 2001, overall exports fell 2% due to weaker demand for machinery & equipment, and to some extent forest products. Foreign affiliate sales saw it's biggest drop (in dollar value) occurring in the Manufacturing sector (-4%). The similar downturn in both machinery & equipment exports and manufacturing sector sales in 2001 does lend support to the notion of cross-border trade and affiliate sales being linked on an industrial basis. Moreover, the similar trend lines in the chart below illustrate a complementary relationship for the period under study.

Chart 1: Foreign affiliate sales versus exports



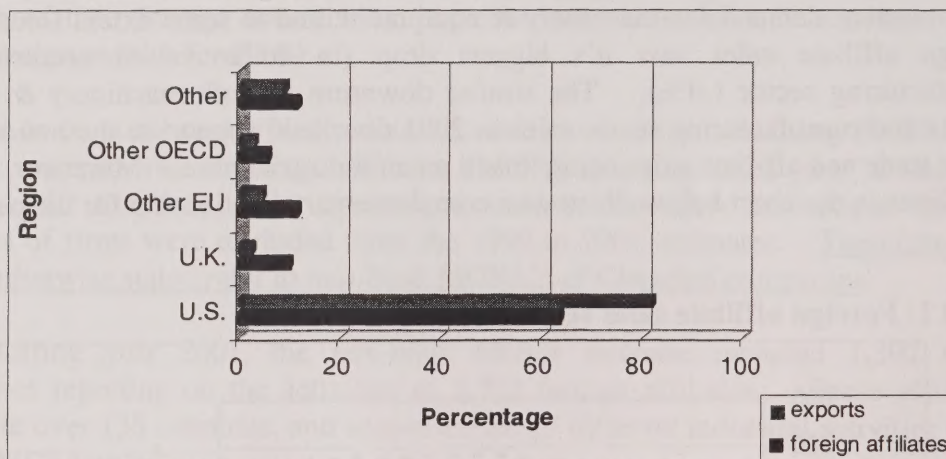
⁹ One such study was published by Industry Canada, *Perspectives on North American Free Trade*, "Modelling Links Between Canadian Trade And Foreign Direct Investment", Walid Hejazi and A. Edward Safarian, University of Toronto, April 1999.

¹⁰ The Insurance sector data are shown on the basis of gross premiums and claims. For additional information please refer to *Canada's International Trade in Services, 2001*, p.57, Statistics Canada, Catalogue no. 67-203-XPB.

Foreign affiliate sales less concentrated than exports

In 2001, approximately 82% of all cross-border exports made their way to the United States as compared with 63% of foreign affiliate sales in the U.S. markets. In addition, sales of foreign affiliates were more evenly distributed among the remaining regions (see chart below). Perhaps, the data in the U.K. best highlight this point. Foreign affiliate sales of \$36 billion accounted for 10% of all sales, whereas exports to the U.K. of \$10 billion represented only 2% of all exports. Recent acquisitions in the U.K. were a factor in foreign affiliate sales reaching this 10% level. The data also reveal that the degree of geographical concentration varies between exports of services and exports of goods. When exports of services are isolated, the geographical concentration (in exports of services) decreases significantly. The U.S. then only receives 59% of service-oriented exports while the U.K. increases from 2% to 7%, which is more in line with foreign affiliate sales. In general, exports of services are less geographically concentrated than those of goods.

Chart 2: Destination of exports versus affiliate sales

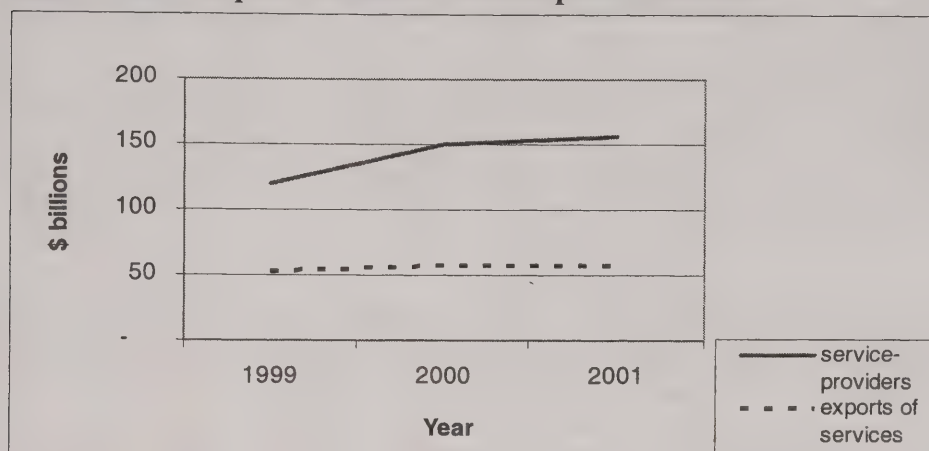


Services sector often requires commercial presence

Goods and services by mode of delivery— commercial presence versus Canadian exports- continue to differ. In 2001, \$415 billion or 88% of cross-border exports were in goods and only \$57 billion or 12% in services. This compares with \$215 billion or 58% of foreign affiliate sales by goods-producers and \$156 billion or 42% by service-providers.

While it is clear that cross-border trade continues to be greater than foreign affiliate sales, it is also clear that service-providers often choose to establish a commercial presence in the foreign market. From 1999 to 2001, the share of exports in services in relation to total exports declined marginally from 13% to 12%, as compared with service-providers seeing their share of foreign affiliate sales increase from 38% to 42%. This trend can be seen in the chart below.

Chart 3: Service-provider sales versus exports in services



Industrial activities

Manufacturing sector continues to be the industrial heavy weight

At \$371 billion in 2001, foreign affiliate sales were up 1% overall from the year 2000. Higher sales in Finance & Insurance, and Mining & Oil & Gas were mostly offset by decreased sales in Manufacturing.¹¹

The Manufacturing sector accounted for \$172 billion or almost half (46%) of the sales. The Computer Equipment and Primary Metals sub-sectors together accounted for just over one-quarter of all Manufacturing sales. The Finance & Insurance sector represented 14% of 2001 sales, considerably higher than its 10% share in 1999. Other notable sectors were Mining & Oil & Gas with 10% of sales, and Information and Cultural Activities with 9%.

¹¹ Finance & Insurance excludes NAICS 5221- Depository Credit Intermediation.

Table 1: Sales, By Industry, 1999 to 2001 ¹²

	1999		2000		2001	
	\$millions	%	\$millions	%	\$millions	%
Agriculture, forestry, fishing and hunting*	834	0.3	546	0.1	487	0.1
Mining and oil and gas extraction*	33,395	10.6	31,225	8.5	36,954	10.0
Utilities & Construction*	5,904	1.9	6,740	1.8	5,325	1.4
Manufacturing	156,070	49.3	179,164	48.7	171,962	46.3
Wholesale trade	13,229	4.2	11,157	3.0	13,311	3.6
Retail Trade	4,392	1.4	3,901	1.1	4,456	1.2
Transportation and warehousing	8,502	2.7	12,716	3.5	11,417	3.1
Information and cultural activities	30,060	9.5	30,821	8.4	32,502	8.8
Finance (non-bank) & Insurance	32,653	10.3	46,701	12.7	51,704	13.9
Professional, scientific and technical services	5,247	1.7	8,717	2.4	8,953	2.4
Management of companies and enterprises	7,111	2.2	12,309	3.3	9,793	2.6
Other services	18,967	6.0	23,644	6.4	24,274	6.5
Total	316,364	100.0	367,641	100.0	371,138	100.0

* Goods only- Services included in Other

Overall foreign affiliate employment was up 39,000 or 4% in 2001. Mining & Oil & Gas Extraction along with Wholesale Trade, and Professional, Scientific & Technical services accounted for a significant portion of the increase. For the majority of the sectors, the employment data are in line with those of sales above. However, one exception is the Finance & Insurance sector where its sales represent a much greater proportion as compared with its employment.

Table 2: Employment, by industry, 1999 to 2001

	1999		2000		2001	
	000's	%	000's	%	000's	%
Agriculture, forestry, fishing and hunting*	1	0.1	1	0.1	1	0.1
Mining and oil and gas extraction*	89	11.6	99	10.9	126	13.3
Utilities & Construction*	5	0.7	8	0.9	11	1.2
Manufacturing	360	47.1	457	50.4	444	47.0
Wholesale trade	20	2.6	20	2.2	29	3.0
Retail Trade	5	0.7	7	0.8	6	0.6
Transportation and warehousing	21	2.7	29	3.2	35	3.7
Information and cultural activities	75	9.8	82	9.1	82	8.7
Finance (non-bank) & Insurance	42	5.5	47	5.2	37	3.9
Professional, scientific and technical services	15	2.0	29	3.2	42	4.4
Management of companies and enterprises	11	1.4	13	1.4	16	1.7
Other services	120	15.7	114	12.6	116	12.3
Total	764	100.0	906	100.0	945	100.0

* Goods only- Services included in Other

¹² Total sales for 1999 were revised upwards to \$316 billion, largely due to a change in methodology (see section on *Data Quality* for additional information).

Geographical regions

Foreign affiliates experience strong growth in Europe

Europe as a whole experienced the greatest increase of all regions. Driven by recent acquisitions, the United Kingdom saw its sales increase by 16%, bringing its share of foreign affiliate sales up 2% to 10% in 2001. Sales in the United States dropped \$9 billion in 2001, yet continued to account for close to two-thirds' (63%) of all sales. All other regions saw their sales increase or remain flat in 2001.

Table 3: Sales, by geography, 1999 to 2001

	1999		2000		2001	
	\$billions	%	\$billions	%	\$billions	%
United States	204	65	243	66	234	63
United Kingdom	24	8	31	8	36	10
Other European Union	38	12	36	10	41	11
Other OECD countries	14	4	17	5	19	5
Other countries	36	11	41	11	41	11
Total	316	100	368	100	371	100

The U.S., the U.K. and Other EU regions all experienced employment increases ranging between 5 % and 10% in 2001, while the OECD region and the other remaining countries experienced a slight decrease.

Table 4: Employment, by geography, 1999 to 2001

	1999		2000		2001	
	000's	%	000's	%	000's	%
United States	475	62	551	61	575	61
United Kingdom	51	7	80	9	88	9
Other European Union	69	9	78	9	87	9
Other OECD countries	48	6	72	8	71	8
Other countries	121	16	125	14	124	13
Total	764	100	906	100	945	100

* Due to rounding, slight discrepancies may appear in the percentage figures.

Goods and services composition of foreign affiliates

Sales in goods outweigh services, but for how long?

There has been a narrowing of the goods/services split for sales of foreign affiliates over the last two years. It now stands at 58/42, as compared with 62/38 in 1999. The goods/services split for foreign affiliate employment is greater than that of sales at a 62/38 composition in 2001. One factor that might explain the recent narrowing trend is the previously mentioned notion that some service-providers are more suited to establish a commercial presence. Another possibility is that the services sector in general

outperformed the goods sector in 2000-2001. The U.S., which was the primary geographic market of foreign affiliates, experienced a greater percentage change in real GDP for 2000 in service-producing industries than for goods-producing.¹³

Table 5: Sales, goods versus services, 1999 to 2001

	1999		2000		2001	
	\$millions	%	\$millions	%	\$millions	%
Goods producers	196,203	62	217,675	59	214,728	58
Service providers	120,161	38	149,966	41	156,410	42
Total	316,364	100	367,641	100	371,138	100

Table 6: Employment, goods versus services, 1999 to 2001

	1999		2000		2001	
	000's	%	000's	%	000's	%
Goods producers	455	60	565	62	582	62
Service providers	309	40	341	38	363	38
Total	764	100	906	100	945	100

Size of foreign affiliates

Larger affiliates drive the numbers

While the phrase 'bigger is not always better' may or may not be true, it is apparent that bigger is better for foreign affiliate sales. Close to one-half (46%) of all sales were attributed to the 3% of foreign affiliates who had direct investment book values greater than \$500 million. The fact that these foreign affiliates represented 67% of the total Canadian direct investment abroad (CDIA) is of no surprise.¹⁴

Employment follows a similar pattern with larger book value foreign affiliates accounting for the majority of the employment. One interesting observation is that the smallest foreign affiliates (under \$25 million) represented only 1% of CDIA yet generated 13% of sales and 19% of employment. With reference to CDIA value, this is very disproportional in relation to the other three book value ranges.

¹³ From 1999 to 2000, the percentage change in Real GDP was 5.4% for service-producing industries and 2.9% for goods-producing industries. *Survey of Current Business, November 2001*, p.18, published by the Bureau of Economic Analysis, Washington, D.C.

¹⁴ Because of its nature, the bulk of direct investment is concentrated among a relatively small number of enterprises. The survey results confirm this with the 100 largest companies (5% of the coverage) accounting for 80% of the total value of direct investment. *Canada's International Investment Position 2001*, p. 29.

Table 7: Selected percentages, by direct investment book value, 3-year average*

Non-bank MOFA's	No. of affiliates	CDIA value	Sales	Employment
Direct investment book value	(%)	(%)	(%)	(%)
Over 500 \$million	3	67	46	39
100 to 499 \$million	7	23	28	28
25 to 99 \$million	12	9	13	14
Under 25 \$million	78	1	13	19
Total	100	100	100	100

3-year average deemed acceptable as little change in distributions between the 3 years under study.

Service-providers greater in number but weaker in sales and employment

Based on 2001 data (with 1999 and 2000 showing very similar results), service-providers represented over one-half (53%) of all foreign affiliate entities and accounted for 55% of direct investment abroad. As we have already seen, service-providers accounted for only 42% of sales and 38% of employment (Tables 5 and 6).

The number of foreign affiliate entities is fairly similar for goods and services within each of the four direct investment book value ranges (Table 8). The only variation is in the smallest affiliates where 41% of foreign affiliates are service-providers and 36% are goods-producers.

The share of CDIA value for the largest foreign affiliates is 39% for service-providers as compared with 29% for goods-producers. Given the similar representation of the number of large affiliates (2%) between goods and services, it must be that on average the largest service-provider had a greater investment than its goods-producing counterpart. Within the largest affiliates (over \$500 million), approximately one-third of service-provider CDIA value belonged to Finance & Insurance. The Information and Cultural activities sector was also significant, accounting for 26% of the CDIA value of service-providers in this book value range. Goods-producers were even more concentrated with the Manufacturing sector accounting for over two-thirds' (69%) of the CDIA value among the largest affiliates.

While the goods-producers had a greater share of foreign affiliate sales in each book value range, the most noticeable difference occurred in the largest affiliates. Goods-producers in the largest affiliate category accounted for 29% of sales while service-providers only accounted for 20%.

Employment in the largest foreign affiliates was more concentrated in goods than in services. Among the largest affiliates, goods-producers accounted for 29% of foreign affiliate employment and service-providers 13%.

In the case of both sales and employment, it is the Manufacturing sector that is driving the numbers. Approximately 82% of sales and 73% of employment among the largest goods-producing foreign affiliates are accounted for by the Manufacturing sector. It could be argued that the scope and size of this sector in itself has a lot to do with its dominant position among goods-producing foreign affiliates.

Table 8: Selected percentages, by direct investment book value, goods vs. services, 2001

<u>Non-bank MOFA's</u>	No. of Affiliates (%)		CDIA Value (%)		Sales (%)		Employment (%)	
	Goods	Services	Goods	Services	Goods	Services	Goods	Services
Direct investment book value								
Over 500 \$million	2	2	29	39	29	20	29	13
100 to 499 \$million	4	4	12	11	14	13	15	13
25 to 99 \$million	6	6	4	4	6	4	7	5
Under 25 \$million	36	41	0	1	8	6	11	8
Total	47	53	45	55	58	42	62	38

* Due to rounding, slight discrepancies may appear in the figures above.

** The data in this table only relate to 2001. As such, they will not reconcile precisely with the 3-year average data presented in Table 7.

Data quality

The coverage of the frame of non-bank MOFA's, based on the set of enterprises that received the questionnaire, is documented elsewhere as "reasonably complete".

(Canada's Balance of International Payments and International Investment Position, Concepts, Sources, Methods and Products, 67-506-XPE, p.95).

Revisions to the estimates for the reference year 1999 were undertaken after further review revealed that the imputation models seemed to underestimate employment and sales among the larger foreign affiliates. Alternative models were proposed and tested, of which one was chosen that imputed more reasonable values for foreign affiliates of all sizes. The chosen model was then used to generate the estimates for reference years 2000 and 2001. To ensure comparability, the same models were applied to generate revised estimates for reference year 1999.

Referring to the reference year 2000 (with 1999 and 2001 being very similar), approximately 1,400 non-bank enterprises with majority-owned foreign affiliates were sent questionnaires, of which approximately 672 (48%) returned a complete or partially complete questionnaire. However, this response represented approximately 2,200 of 3,800 (58%) foreign affiliates. Administrative and other data sources are used to improve the overall quality of the data. These might include annual reports, financial statements, news releases and investment reports.

To maximize the accuracy of the results, data that were not collected for a particular reference year were obtained by applying the previous year's values (unadjusted), or from administrative sources, as available. Missing values of partially complete responses were imputed using deterministic regression models. Data from complete responses (excluding imputed data from previous reference years) were used to create and validate the regression models. Of the 3,668 foreign affiliates in the reference year 2000 with usable data, imputed values of sales were generated for 1,851 (50%) affiliates; imputed values of employment were generated for 1,857 (51%) affiliates.

To compensate for affiliates, for which no data were available, a weight adjustment was used as part of the estimation process. To avoid undue impact of the largest affiliates, for which data were available, these affiliates were assigned a weight of 1.

Every published result by sector group has a coefficient of variation of 10% or less. Given the highly positively skewed distributions of both sales and employment, this threshold is of reasonable magnitude for a survey of this size. As well, there were sufficient numbers of available data (minimum of 20 observed values), either from responses to the questionnaire or from other sources, in each sector group to consider the quality of the data as acceptable or better.

Appendix¹⁵

Ownership

For purposes of FATS, majority-owned foreign affiliates, that is enterprises in which the direct investor owns more than 50% of the voting shares, are included in the universe. Economic variables are attributed in their entirety to a single country and are not factored down by ownership shares.

Country of Origin

Most countries compile foreign direct investment statistics according to the BPM5¹⁶ which recommends that direct investment position statistics be allocated to the immediate host or investing country. Therefore, given the current situation, the immediate basis will be accepted as the most expedient way of producing FATS. In the longer-term, the UBO (Ultimate Beneficial Owner) approach is encouraged. Ideally, reporting countries would report on both bases for different analytical purposes.

Classification – Product or Industry

The GATS requires information on the sales of services from foreign affiliates on a product basis. However, at the present time no country is in a position to collect sufficient data at this level. The new *Manual on Statistics of International Trade-in-Services* has recommended that compilers proceed on an industry or economic activity basis for the present time. In Canadian FATS, the activity of each foreign affiliate is collected on the basis of the NAICS classification.

Economic variables

i) Sales or Gross Operating Revenue

This is one of the most important FATS variables. Enterprises are instructed to exclude investment income from gross operating revenue, as it is conceptually different from sales. Special instructions are provided for banks, insurance companies and holding companies where the definition of sales can be more complex.

ii) Employment

Enterprises are asked to report the average annual number of employees for each foreign affiliate.

Foreign Direct Investment (FDI)

FDI is an investment of a resident entity in one economy obtaining a lasting interest in an enterprise resident in another economy. The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the investor on the management of the enterprise. Outward FDI is synonymous with Canadian direct investment abroad (CDIA).

¹⁵ Some of the definitions and concepts have been condensed from *Foreign Affiliate Trade Statistics, Measuring Economic Globalization, A Canadian Perspective– From Research to Reality*.

¹⁶ *Balance of Payments Manual*, 5th Edition, International Monetary Fund, 1993.

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